

## CLAIMS

1. A stent delivery system comprising:
  - a stent delivery catheter, the stent delivery catheter having a stent mounting region, the stent mounting region having an inflatable portion;
  - 5 a stent disposed about the stent mounting region, the stent having an unexpanded position and an expanded position;
    - at least one stent retaining sleeve having first and second ends, the first end being attached to the stent delivery catheter, the at least one stent retaining sleeve disposed about at least a portion of the stent in the unexpanded position, the stent
    - 10 retaining sleeve being constructed and arranged to retract toward the attached first end when the stent is expanded.
2. The stent delivery system of claim 1 wherein the at least one stent retaining sleeve is ribbed.
3. The stent delivery system of claim 1 wherein the at least one stent retaining sleeve
- 15 is pleated.
4. The stent delivery system of claim 1 wherein the at least one stent retaining sleeve has a plurality of openings.
5. The stent delivery system of claim 1 wherein the at least one stent retaining sleeve is comprised of at least two materials.
- 20 6. The stent delivery system of claim 5 wherein the at least one stent retaining sleeve is comprised of alternating strips of the at least two materials.
7. The stent delivery system of claim 1 wherein the first end is attached proximally of the stent.
8. The stent delivery system of claim 1 wherein the first end is attached distally of
- 25 the stent.
9. The stent delivery system of claim 1 wherein the at least one stent retaining sleeve comprises proximal and distal stent retaining sleeves, each having first and second ends, the first end of the proximal stent retaining sleeve being attached to the stent delivery catheter proximally of the stent and the first end of the distal stent retaining sleeve being
- 30 attached to the stent delivery catheter distally of the stent.
10. The stent delivery system of claim 9 wherein the proximal and distal stent

retaining sleeves overlap.

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